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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Franz Kaspar

14261

1491

Orum & Roth
Suite 1616
53 West Jackson Boulevard
Chicago, IL 60604-3750

7590

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EXAMINER

SAVAGE, JASON L

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,581	Applicant(s) KASPAR ET AL	
	Examiner JASON L. SAVAGE	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060123</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election of Group I, claims 1-19 in the reply filed on 5-26-09 is acknowledged. Since Applicant did not point out any error in the restriction requirement or argument as to why the restriction is improper, the election is considered to be **without** traverse and thus made FINAL.

Specification

The abstract of the disclosure is objected to because in the paragraph to be inserted on page 1, in line 4 it recites "claim 1". Specific claim numbers are also recited on page 4, lines 5-6 and page 6, line 2. Specific claim numbers should not be recited in the specification since they are subject to change such as by amendment or cancellation.

The specification also does not provide a basis for the claim limitation recited in claim 1 wherein the addition to the silver or silver-based alloy 'will not form an alloy with silver or with the silver-based alloy or will at best form a precipitation alloy'. It would be beneficial to add a description of the recited limitation to the specification to provide a basis for the limitation in the disclosure.

Correction is required. See MPEP § 608.01(b).

Drawings

The specification includes a brief description of Figure 1 and references drawing showing a strip-like semi-finished product on page 7 of the specification; however it

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does not appear that any drawings have been submitted. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Objections

Claims 12 and 15 are objected to because of the following informalities: In line 2 of both claims 12 and 15 the claim recites "wherein **at**". The word "at" appears to be a typographical error/inclusion. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat.

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App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Regarding claim 10, the claim recites the broad recitation that the addition comprises one of the recited substances of Tungsten, molybdenum, graphite, nickel, cobalt and material oxides, tungsten carbide and molybdenum carbide and the claim also recites especially tin oxide and zinc oxide which is the narrower statement of the range/limitation.

Regarding claim 11, the claim recites the broad recitation that the coating is deposited by a PVD process and the claim also recites especially sputtering which is the narrower statement of the range/limitation.

Regarding claim 12, the claim recites the broad recitation of various Cu alloys such as CuNiSi(x), CuFeP, etc and the claim also recites subspecies of the recited alloy types C7025, C7026 *for example* which is the narrower statement of the range/limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10-11, 13-14 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ricketts et al (US 5,967,860),

Ricketts teaches electrical plug-in connectors having a silver-based coating exhibiting prolonged fretting wear durability at elevated temperatures (col. 1, ln. 5-41).

Ricketts further teaches the silver-based coating has a thickness between 0.5-2 μm and contains nickel and carbon dispersed as discontinuous phases throughout a continuous silver phase (col. 2, ln. 36-67). As such, the coating meet the claimed thickness and limitation that the additions such as nickel and carbon do not form an alloy with silver.

Regarding claims 2-4, the coating thickness of Ricketts overlaps and anticipates the claimed thickness between 0.3-2.0 μm .

Regarding claims 5-8, Ricketts teaches the additions of Ni and C may be between 10-25 and 5-15 at % respectively (col. 2, ln. 42-45). Furthermore, Ricketts teaches various embodiment such as an Ag coating containing 11% Ni and 10% C which would fall within the ranges recited in the claims.

Regarding claim 10, Ricketts teaches that the addition comprises a substance such as nickel and carbon which would meet the claim limitations.

Regarding claim 11, the claims are drawn to an article, not the method of making. Although Ricketts teaches forming the coating by electrodeposition, absent a teaching of the criticality or showing of unexpected results from employing any particular PVD process it would not provide a patentable distinction over the prior art.

Regarding claim 13, Ricketts teaches a connector strip **14** (Fig 1).

Regarding claim 14, the claims are drawn to an article, not the method of making. However, the strip of Ricketts would be considered to be as pre-punched as the article claimed by Applicant.

Regarding claims 16-17, Ricketts teaches forming an intermediate layer of nickel (col. 2, ln. 52-67) which would serve as a diffusion-inhibiting layer such as claimed.

Regarding claim 18, Ricketts further teaches that a silver topcoating may be applied to the product to stabilize the contact resistance (col. 2, ln. 60-67). The contact having such a silver topcoat would meet the claim limitation wherein the concentration of the addition at the surface of the silver coating is lower than at a deeper region within the coating.

Regarding claim 19, the contacts of Ricketts are plug-in connecting contacts (col. 1, ln. 12-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricketts et al (US 5,967,860).

Regarding claim 9, although Ricketts does not exemplify an embodiment wherein the ranges of both Ni and C fall within the claimed range, it teaches ranges which overlap and fall within the claimed range such as 10% of Ni and 5% of C.

Regarding claim 11, Ricketts is silent to applying the coating by a PVD process. However, it teaches that while electrodeposition is preferred for forming an intermediate coating, it can be applied by vapor deposition as well. (col. 2, ln. 58-59). It would have been obvious to one of ordinary skill in the art to recognize that alternate deposition processes could be employed to form the silver-based coating of Ricketts such as by vapor deposition with a reasonable expectation of success.

Regarding claim 12, although Ricketts teaches that copper alloys and stainless steel are conventionally employed (col. 1, ln. 42-43), it is silent to the specific alloys such as those claimed. However, the recited alloys are conventional copper alloys employed in electrical applications. It would have been obvious to one of ordinary skill in the art to have selected any known copper or stainless steel alloy known to be suitable for use as connector substrate in the connectors of Ricketts with a reasonable expectation of success.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricketts et al (US 5,967,860) as applied to claims 1-14 and 16-19 above, further in view of Koichi (JP 59-153852 English Abstract).

Ricketts teaches what is set forth above however it is silent to the silver coating containing tungsten or molybdenum in the amount claimed. However, Koichi teaches an electrical contact material having improved consumption and welding resistance by adding specified percentages of various additives including Ni, W and Mo (abs). Ricketts further teaches that Mo and W may be added to the silver coating material between 0.05-5.0 wt % (abs). As such, it would have been obvious to have added 0.05-5 wt% of an alternate additive such as W or Mo so as to form a contact material having improved consumption resistance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/
Examiner
7-30-09

/JENNIFER MCNEIL/
Supervisory Patent Examiner, Art Unit 1794